

PATENT CLAIMS

1. A method for setting a wavelength-dependent output signal of a light-sensitive integrated circuit (1),

5 - wherein the output signals of the integrated circuit (1) are measured at different measured wavelengths (λ_1 , λ_2 , λ_3),

 - the measured values (31, 32, 33) are compared to setpoint values (21, 22), which are predefined for each measured wavelength (λ_1 , λ_2 , λ_3), and correction values (4) are calculated from the comparison,

10 - and information about the correction values (4) is stored permanently in the integrated circuit (1).

2. The method according to Claim 1,

 - wherein an integrated circuit (1) is used which is a component of a semiconductor
15 substrate (5),

 - and the setting is performed using a testing card (6) for integrated circuits.

3. The method according to one of Claims 1 or 2,

 wherein a light-emitting diode (71, 72) is used as the light source for each
20 measured wavelength (λ_1 , λ_2 , λ_3).

4. The method according to one of Claims 1 through 3,

- wherein an integrated circuit (1) is used, whose wavelength-dependent sensitivity runs in a wave,

- and the smallest interval between two measured wavelengths ($\lambda_1, \lambda_2, \lambda_3$) is selected so that it is smaller than each interval ($\Delta\lambda$) between a relative sensitivity

5 maximum and a relative sensitivity minimum of the wavelength-dependent sensitivity.

5. The method according to Claim 4,

- wherein a sensitivity curve (3), which is compared to a setpoint curve (21, 22), from which a correction curve is calculated, is determined for the measured values (31, 32,
10 33) using interpolation,

- and information about the correction curve is stored permanently in the integrated circuit (1).

6. The method according to one of Claims 1 through 5,

15 wherein the integrated circuit (1) contains one or more photodiodes (91, 92).

7. The method according to one of Claims 1 through 6,

wherein Zener diodes (101, 102) are used for storing information on the integrated circuit (1).

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8. A semiconductor chip containing a light-sensitive integrated circuit (1), as well as information stored thereon for correcting the wavelength-dependent output signal of the integrated circuit (1).

- 5 9. The semiconductor chip according to Claim 8,
- additionally containing a temperature sensor (300) for measuring the temperature of an external light source,
 - as well as correction data for correcting the temperature-dependent wavelength of the external light source.

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10. A method for operating a semiconductor chip according to Claim 8,
- wherein an external light source illuminates the integrated circuit (1) and an output signal is thus generated,
 - information about the wavelength of the light source is transmitted to the
- 15 integrated circuit (1),

- and the information about the wavelength is used for correcting the wavelength-dependent output signal of integrated circuit (1).

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11. A method for operating a semiconductor chip according to Claim 9,
- wherein an external light source illuminates the integrated circuit (1) and an output signal is thus generated,

- information about the wavelength of the light source is transmitted to the integrated circuit (1),

- the temperature of the external light source is measured,

- the information about the wavelength of the light source is corrected using the

5 measured temperature and the corresponding correction data,

- and the output signal is corrected using the corrected wavelength of the light source and corresponding correction data.